**Attachment 1**

**Joint Application and Plans**

JOINT APPLICATION FORM Start Code - 0017XDC

Department of the Army/TVA

RLC # 100330

a Department of the Army (DA) permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Cl
/ater Act (P.L. 95-217). These laws require permits authorizing structures and work in or affecting navigable waters of the United States and the
ischarge of dredged or fill material into waters of the United States. Section 26a of the Tennessee Valley Authority Act, as amended, prohibits
onstruction, operation, or maintenance of any structure affecting navigation, flood control, or public lands or reservations across, along, or in the
ennessee River or any of its tributaries until plans for such construction, operation, and maintenance have been submitted to and approved by the
ennessee Valley Authority (TVA).

lame and Address of Applicant

Hallsdale-Powell Utility District
3745 Cunningham Road
Knoxville, Tenn. 37918

elephone Number
Home
Office ~~865~~ 922-7547

Name, Address, and Title of Authorized Agent

Robert G. Campbell
Engineer

Telephone Number
Home 922-7976
Office 947-7556

ocation where activity exists or will occur (include Stream Name nd Mile, if known)

Bull Run - Mile 2±
XMHR-80PT Clinch-
OPP. Clinch R.V. 46.3 C
Anderson County 9-D

Application submitted to

DA ☐ Yes ☐ No TVA ☐ Yes ☐ N

Date activity is proposed to commence June 2000

Date activity is proposed to be completed June 2001

escribe in detail the proposed activity, its purpose and intended use (private, public, commercial, or other). Describe structures to ected including those placed on fills, piles, or floating platforms. Also describe the type, composition, and quantity of materials to scharged or placed in the water; the means of conveyance; and the source of discharge or fill material. Please attach additional neets if needed.

This project involves the construction of a new Raw Water Intake to supply the Hallsdale Powell Utility District serving the North section of Knox County and some areas of Anderson County. The District presently serves 22,000 customers. The facility is required due to the phenomenal growth in the area

PAID
FEB 22 2000
#1666

plication is hereby made for approval of the activities described herein. I certify that I am familiar with the information contained in s application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify th ssess the authority to undertake the proposed activities. I agree that, if this application is approved by TVA, I will comply wit e attached terms and conditions and any special conditions that may be imposed by TVA at the time of approval. Please te the U.S. Army Corps of Engineers may impose additional conditions or restrictions.

2-22-2000
Date

Signature of Applicant

U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly a fully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or resentations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall b d not more than $10,000 or imprisoned not more than five years, or both. The appropriate DA fee will be assessed when a permit is issued.

A 17423 (6-1999) [6-1999] Page 1 of 2

# FIELD INSPECTION CHECKLIST
## Section 26a and Land Use

| | | |
|---|---|---|
| ☒ On reservoir or regulated stream<br>☐ Off reservoir - go to EDR process | TVA Tract No. XMHR-80 PT | Project No. 100330 |
| Applicant: Hallsdale Powell Utility Dist. | Project Description: Raw Water Intake | |

| | | | | |
|---|---|---|---|---|
| ☐ 26a Category I | ☐ 26a Category II | ☒ 26a Category III | ☐ Minor Land Use | ☐ Other |

- Has the site been previously reviewed such that the proposed action is environmentally cleared?
  ☐ Yes; reference document: _____ Date: _____
  ☒ No; inspect site
- For requests that require *environmental concurrence or coordination*, attach D-stage map; portion of quadrangle map (and acquisition map if No. 15, 16 or 17 are marked) and at least 2 site photographs. Maps should show boundaries of proposed work area(s). Photos should include one of impact areas (close up) and one broader view (impact area + site). Indicate date pictures taken and take level. If possible, indicate line of site for pictures using an arrow on the map(s).

### SITE COMPATIBILITY (Section 26a reviews only)

1. Will the proposed facility(ies) extend beyond 1/3 of the cove or slough? ☐ yes *(modify plans)* ☒ no
2. Will the proposed facility(ies) affect existing facility(ies) or any potential future facility(ies) such as in an outlot situation? ☐ yes *(modify plans)* ☒ no

### NAVIGATION (Section 26a reviews only)

3. Will the proposed facility(ies) be located near the following ☒ yes *(coord. w/Bob Buchanon, WT 10C-K)* ☐ no
   - ☐ a navigation marker
   - ☐ a light
   - ☐ a safety harbor
   - ☐ shoreline which requires navigation review

   If the site needs review by a navigation specialist, indicate any shoreline characteristics that may affect navigation's approval of the facility
   - ☐ rock outcroppings
   - ☐ bank erosion
   - ☒ other Line going to Bridge

### TRANSMISSION SYSTEM

4. Is there a TVA transmission line crossing at the site (lot)? ☐ yes *(coord. w/Tom Wojtalik, MR 5K-C)* ☐ no

### SITE INFORMATION OBSERVATIONS

5. Adjacent/backlying land use:
   - ☒ no development
   - ☐ residential
   - ☐ recreational
   - ☐ commercial
   - ☐ industrial
   - ☐ agricultural
6. Natural shoreline features:
   - ☐ undercut bank
   - ☐ rock outcroppings
   - ☒ height of bank in feet ~ 1'-2'
7. Shoreline erosion:
   - ☐ none (stabilized, rock outcrop, bluff)
   - ☒ minimal (adequate vegetative cover, grass/shrub cover)
   - ☐ moderate (<2' vertical bank and/or limited vegetative cover)
   - ☐ severe (>2' vertical bank and/or limited vegetative cover, bank sloughing, rills and gullies)
8. Manmade shoreline features:
   ☐ riprap ☐ seawall ☒ other Pine
9. Topography / percent (%) slope:
   ☒ gentle / (0-5%) ☐ medium / (6-20%) ☐ steep / (>20%)

JUN 1 8 2001

ROBERT G. CAMPBELL & ASSOCIATES, L.P.

7523 TAGGART LANE
KNOXVILLE, TN 37938
(865) 947-5996
FAX (865) 947-7556
e-mail: rgcampb@aol.com

June 14, 2001

Scott Ledford
Tennessee Valley Authority
Melton Hill Management Office
2009 Grubb Road
Lenoir City, TN 37771

Dear Mr. Ledford

I have responded to questions that you raised to the proposed intake for Hallsdale Powell Utility District.

1. Number of gallons per day will be used.
Initially there will be 6 – 7 million gallons per day. The projections for the intake at the maximum withdrawal will be 20 million gallons per day. The existing intake will be taken out of active service, but will be used once every two months or so for to exercise the pumps. It will be used as a back-up should something happen to the new intake

2. Size of screen at the end of pipe.
The screen is 4 feet in diameter and 6.5 feet long. The length includes a bullet nose protector to keep debris from fouling the screen

3. The amount of suction that this pump will create.
The pump should create no suction. There will be a draw-down of 1 foot in the wet well, but in the channel there will be little discernable difference. The reason for this is the volume of the reservoir vs. the volume that is being withdrawn.

4. Warning Signs - Size and placement.
Those will be placed in accordance with your specifications. We are planning warning signs at the intake itself along with a buoy over the screen location. In order to clean the screen, a manual backflush operation will be performed. A warning horn as well as outside spotlights illuminating the screen area will be installed.

5. Power Source
Power will come from Clinton Utilities Board. The 3 - 1000 HP motors will use a 2300 volt service. We are also investigating TVA as a secondary source of power or an emergency generator.

6. Hours of operation.
Operation will be twenty four hours, not continuously, but whenever demands occur at the treatment plant

7. Minimum water depth pump can function.
The low pool for the reservoir is elevation 790 MSL. The suction of our pump will be at nearly elevation 783.7. This gives our pumps 6.3 feet of water and allows us to meet the minimum submergence as well as the Net Positive Suction Head requirement recommended by the pump manufacturer to avoid vortex and suction problems

8. Length of pipe
There will be a total length of 270 feet from our property line. Of that, 87 feet will be out of the ground and exposed in the channel

9. Method of Anchoring pipe.
Pipe will be anchored with concrete supports placed every 20 feet apart in the exposed section. These anchors will have foundations that extend into the lake bottom at sufficient depth to provide support. Each support will be secured by threaded bolts and a plate over the top of the pipe section

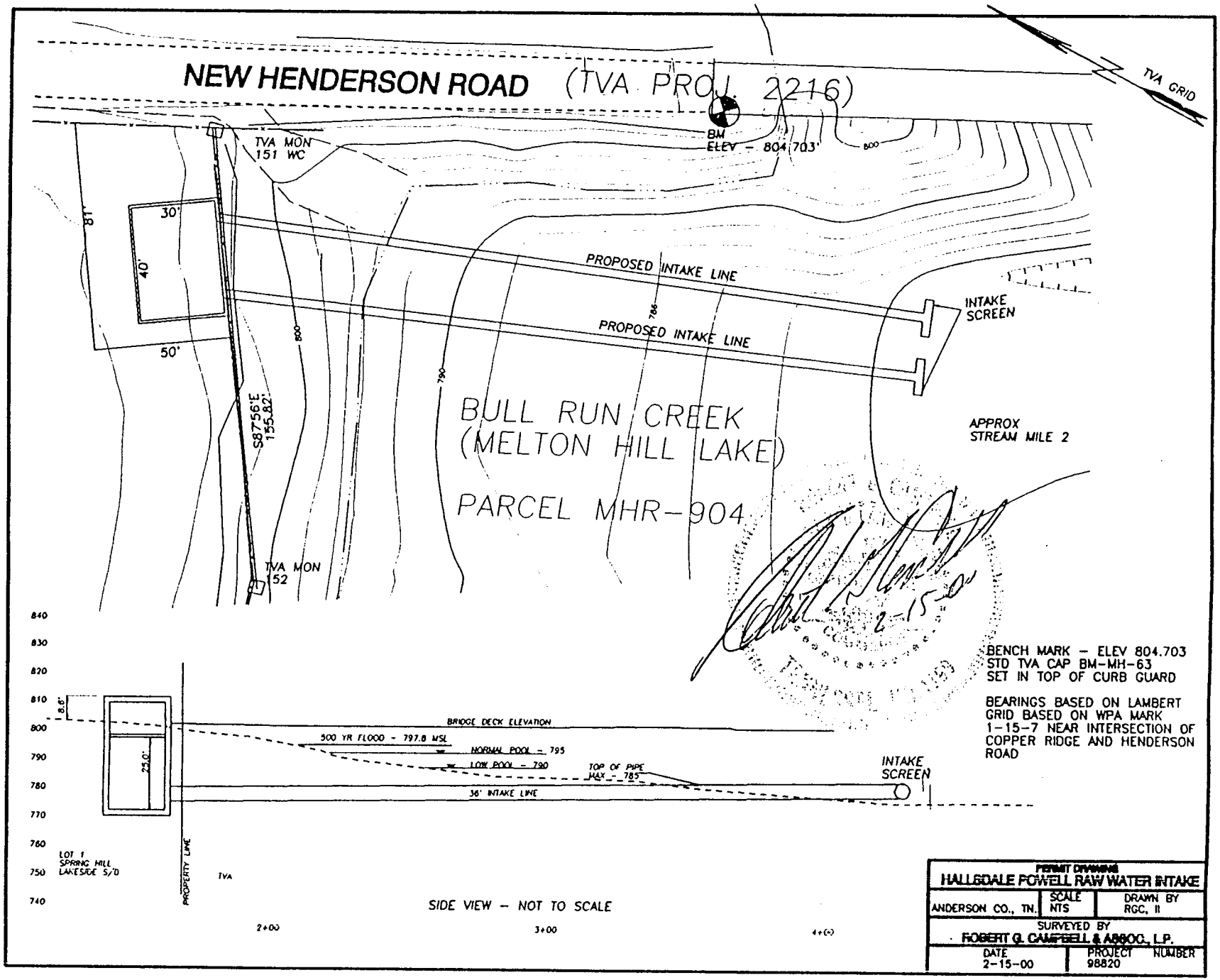
10. Operation signs of schedule of suction.
Because of the passive nature and indeterminate demand schedules from the plan, we will have no set schedule. We do plan to have warning signs posted in accordance with TVA specifications regarding the location of underwater intake structures.

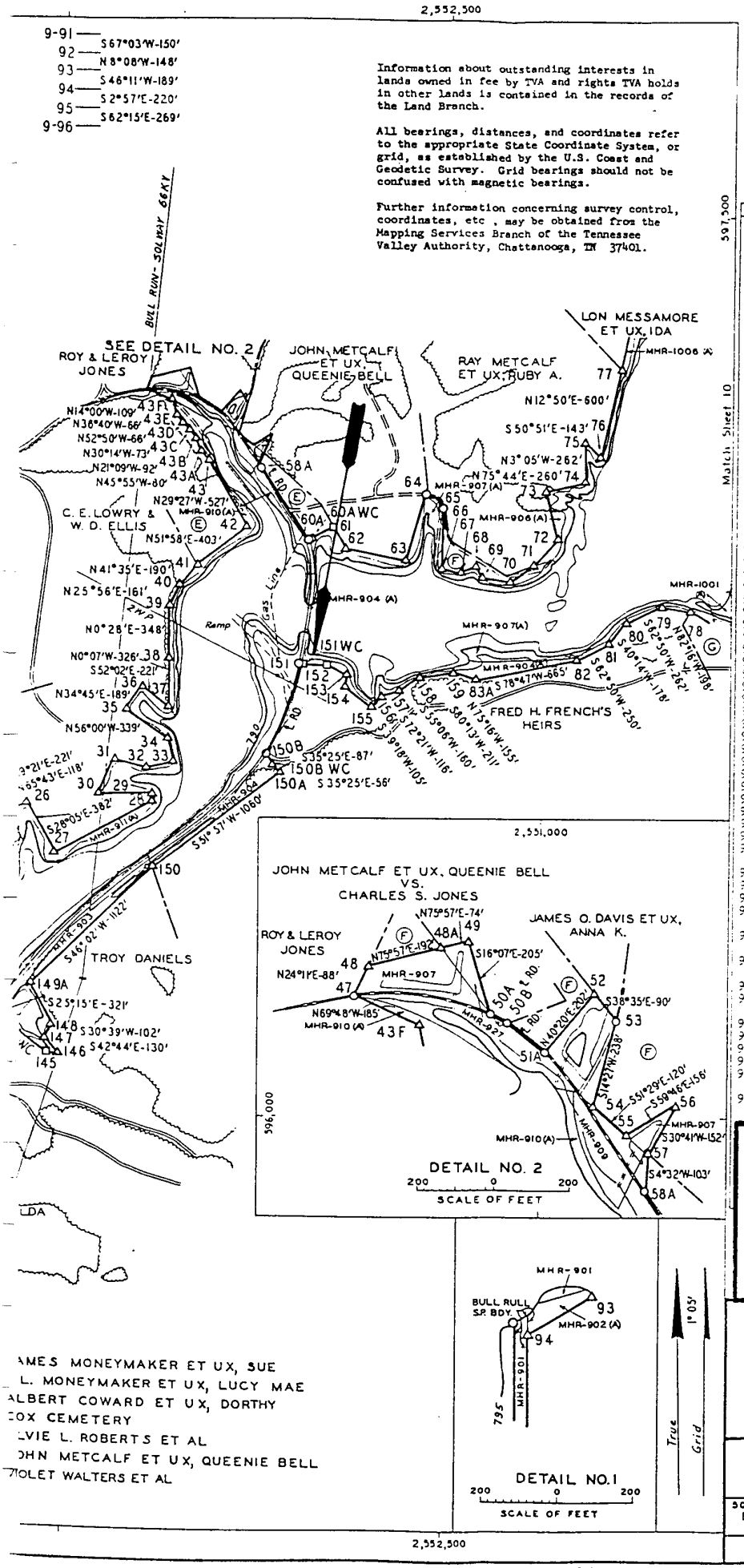
I hope this answers the questions that you may have regarding the new intake. We believe this to be a vital project for the long-term success of the district as it will improve the ability of Hallsdale Powell to serve its customers with the quantity and quality of water that the future requires.

Sincerely,

Robert G. Campbell

Robert G. Campbell, PE


NEW HENDERSON ROAD (TVA PROJ 2216)
TVA GRID
BM
ELEV = 804.703'
TVA MON
151 WC
30'
40'
50'
PROPOSED INTAKE LINE
PROPOSED INTAKE LINE
INTAKE
SCREEN
S8756'E
155.82'
BULL RUN CREEK
(MELTON HILL LAKE)
PARCEL MHR-904
APPROX
STREAM MILE 2
TVA MON
152
BENCH MARK - ELEV 804.703
STD TVA CAP BM-MH-63
SET IN TOP OF CURB GUARD
BEARINGS BASED ON LAMBERT
GRID BASED ON WPA MARK
1-15-7 NEAR INTERSECTION OF
COPPER RIDGE AND HENDERSON
ROAD
840
830
820
810
800
790
780
770
760
750
740
8.6'
25.0'
BRIDGE DECK ELEVATION
500 YR FLOOD - 797.8 MSL
NORMAL POOL - 795
LOW POOL - 790
TOP OF PIPE
MAX - 785
INTAKE
SCREEN
36" INTAKE LINE
LOT 1
SPRING HILL
LAKESIDE S/D
PROPERTY LINE
TVA
SIDE VIEW - NOT TO SCALE
2+00
3+00
4+00
PERMIT DRAWING
HALLSDALE POWELL RAW WATER INTAKE
ANDERSON CO., TN.
SCALE
NTS
DRAWN BY
RGC, II
SURVEYED BY
ROBERT G. CAMPBELL & ASSOC., L.P.
DATE
2-15-00
PROJECT NUMBER
98820




PROPERTY CORNER COORDINATES

| CORNER | X | Y | CORNER | X | Y |
|---|---|---|---|---|---|
| | Tenn. Grid | | | Tenn. Grid | |
| 8-1 | 2,547,173 | 590,058 | 9-65 | ℄ Road | |
| 8-2 | 2,547,473 | 589,861 | 9-66 | 2,552,464 | 595,132 |
| 9-4 | 2,547,470 | 594,610 | 9-67 | 2,552,587 | 595,107 |
| 9-4 | ℄ Road | | 9-68 | 2,552,676 | 595,148 |
| 9-5 | 2,547,540 | 594,610 | 9-69 | 2,552,719 | 595,077 |
| 9-5 | ℄ Road | | 9-70 | 2,552,908 | 595,050 |
| 9-6 | 2,547,738 | 594,558 | 9-71 | 2,553,058 | 595,163 |
| 9-6 | ℄ Road | | 9-72 | 2,553,214 | 595,341 |
| 9-7 | 2,547,816 | 594,475 | 9-73 | 2,553,136 | 595,556 |
| 9-7 | ℄ Road | | 9-74 | 2,553,388 | 595,720 |
| 9-13 | 2,548,432 | 593,317 | 9-75 | 2,553,374 | 595,982 |
| 9-14 | 2,548,551 | 593,361 | 9-76 | 2,553,485 | 595,891 |
| 9-14 | ℄ Road | | 9-77 | 2,553,618 | 596,477 |
| 9-16 | 2,548,611 | 593,290 | 9-78 | 2,554,107 | 594,871 |
| 9-16 | ℄ Road | | 9-79 | 2,553,910 | 594,898 |
| 9-16 WC | 2,548,629 | 593,302 | 9-80 | 2,553,677 | 594,778 |
| 9-17 | 2,548,736 | 593,372 | 9-81 | 2,553,562 | 594,642 |
| 9-18 | 2,548,739 | 593,641 | 9-82 | 2,553,340 | 594,528 |
| 9-19 | 2,548,667 | 593,767 | 9-83A | 2,552,687 | 594,399 |
| 9-20 | 2,548,606 | 593,906 | 9-84 | 2,549,415 | 591,744 |
| 9-21 | 2,548,598 | 593,997 | 9-84 | ℄ Road | |
| 9-22 | 2,548,962 | 594,292 | 9-84 WC | 2,549,395 | 591,770 |
| 9-23 | 2,549,398 | 594,197 | 9-84A | 2,549,484 | 591,947 |
| 9-24 | 2,549,574 | 593,699 | 9-84A | ℄ Road | |
| 9-25 | 2,549,647 | 593,490 | 9-85 | 2,549,291 | 591,912 |
| 9-26 | 2,549,754 | 593,539 | 9-86 | 2,549,049 | 591,867 |
| 9-27 | 2,549,934 | 593,202 | 9-87 | 2,548,282 | 591,513 |
| 9-28 | 2,550,574 | 593,557 | 9-88 | 2,548,226 | 591,202 |
| 9-29 | 2,550,568 | 593,614 | 9-89 | 2,547,965 | 591,271 |
| 9-30 | 2,550,224 | 593,607 | 9-90 | 2,547,770 | 591,248 |
| 9-31 | 2,550,336 | 593,848 | 9-91 | 2,547,740 | 591,144 |
| 9-32 | 2,550,540 | 593,791 | 9-92 | 2,547,602 | 591,085 |
| 9-33 | 2,550,721 | 593,830 | 9-93 | 2,547,581 | 591,232 |
| 9-34 | 2,550,680 | 593,985 | 9-94 | 2,547,445 | 591,101 |
| 9-35 | 2,550,399 | 594,175 | 9-95 | 2,547,456 | 590,881 |
| 9-36 | 2,550,507 | 594,330 | 9-96 | 2,547,634 | 590,756 |
| 9-37 | 2,550,681 | 594,194 | 9-97 | 2,548,166 | 590,186 |
| 9-38 | 2,550,680 | 594,520 | 9-97 | Stone | |
| 9-39 | 2,550,683 | 594,868 | 9-142 | 2,545,713 | 594,112 |
| 9-40 | 2,550,753 | 595,013 | 9-144 | 2,549,563 | 592,119 |
| 9-41 | 2,550,880 | 595,155 | 9-144 | ℄ Road | |
| 9-42 | 2,551,197 | 595,404 | 9-144 WC | 2,549,596 | 592,095 |
| 9-43 | 2,550,938 | 595,863 | 9-145 | 2,549,905 | 591,868 |
| 9-43A | 2,550,880 | 595,918 | 9-146 | 2,549,961 | 591,359 |
| 9-43B | 2,550,847 | 596,004 | 9-147 | 2,549,874 | 591,954 |
| 9-43C | 2,550,810 | 596,067 | 9-148 | 2,549,226 | 592,042 |
| 9-43D | 2,550,758 | 596,107 | 9-149A | 2,549,789 | 592,332 |
| 9-43E | 2,550,718 | 596,160 | 9-150 | 2,550,597 | 593,121 |
| 9-43F | 2,550,692 | 596,266 | 9-150A | 2,551,431 | 593,764 |
| 9-47 | 2,550,518 | 596,330 | 9-150B | 2,551,348 | 593,881 |
| 9-47 | ℄ Road | | 9-150B | ℄ Road | |
| 9-48 | 2,550,554 | 596,410 | 9-150B WC | 2,551,399 | 593,810 |
| 9-48A | 2,550,741 | 596,457 | 9-151 | 2,551,548 | 594,495 |
| 9-49 | 2,550,812 | 596,475 | 9-151 | ℄ Road | |
| 9-50A | 2,550,369 | 596,278 | 9-151 WC | 2,551,578 | 594,494 |
| 9-50A | ℄ Road | | 9-152 | 2,551,734 | 594,488 |
| 9-50B | 2,550,912 | 596,255 | 9-153 | 2,551,959 | 594,416 |
| 9-50B | ℄ Road | | 9-154 | 2,551,846 | 594,344 |
| 9-51A | 2,551,011 | 596,178 | 9-155 | 2,552,022 | 594,195 |
| 9-51A | ℄ Road | | 9-156 | 2,552,088 | 594,276 |
| 9-52 | 2,551,142 | 596,332 | 9-157 | 2,552,199 | 594,311 |
| 9-53 | 2,551,198 | 596,262 | 9-158 | 2,552,330 | 594,402 |
| 9-53 | ℄ Road | | 9-159 | 2,552,537 | 594,438 |
| 9-54 | 2,551,138 | 596,332 | BR 3-18 | 2,548,235 | 593,943 |
| 9-55 | 2,551,232 | 595,957 | BR 3-18 | ℄ Road | |
| 9-56 | 2,551,368 | 596,035 | BR 3-19 | 2,548,339 | 593,784 |
| 9-57 | 2,551,290 | 595,903 | BR 3-19 | ℄ Road | |
| 9-58A | 2,551,282 | 595,803 | BR 3-20 | 2,548,346 | 593,773 |
| 9-58A | ℄ Road | | BR 3-20 | ℄ Road | |
| 9-60A | 2,551,598 | 595,318 | BR 3-25 | 2,548,247 | 593,706 |
| 9-60A | ℄ Road | | BR 3-26 | 2,548,339 | 593,246 |

NAME Hallsdale Powell Utility Dist

TRACT XMHR-80 PT

RIVER MILE 46.3 L

100330 - RLR #

Anderson

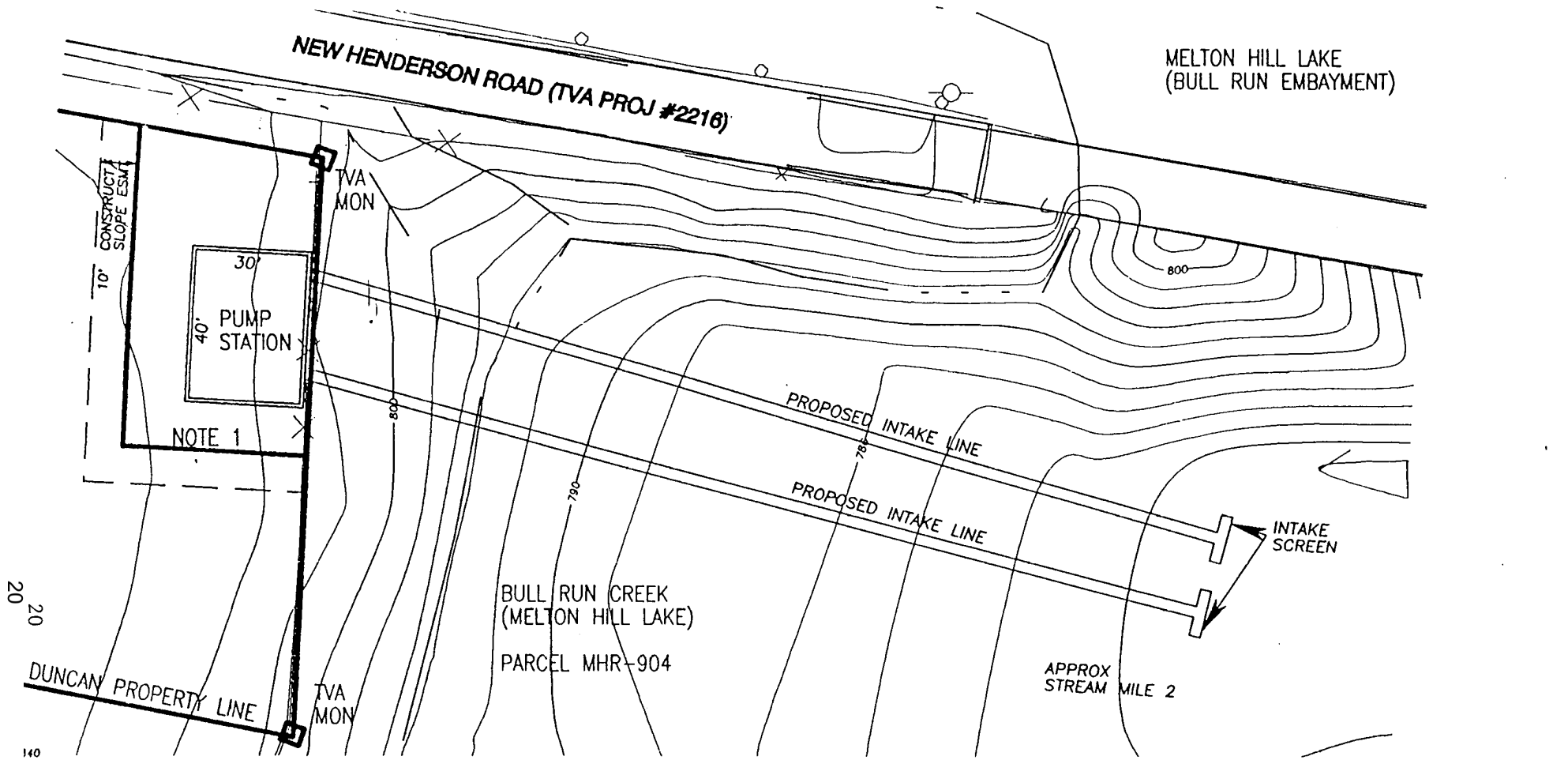
MELTON HILL RESERVATION

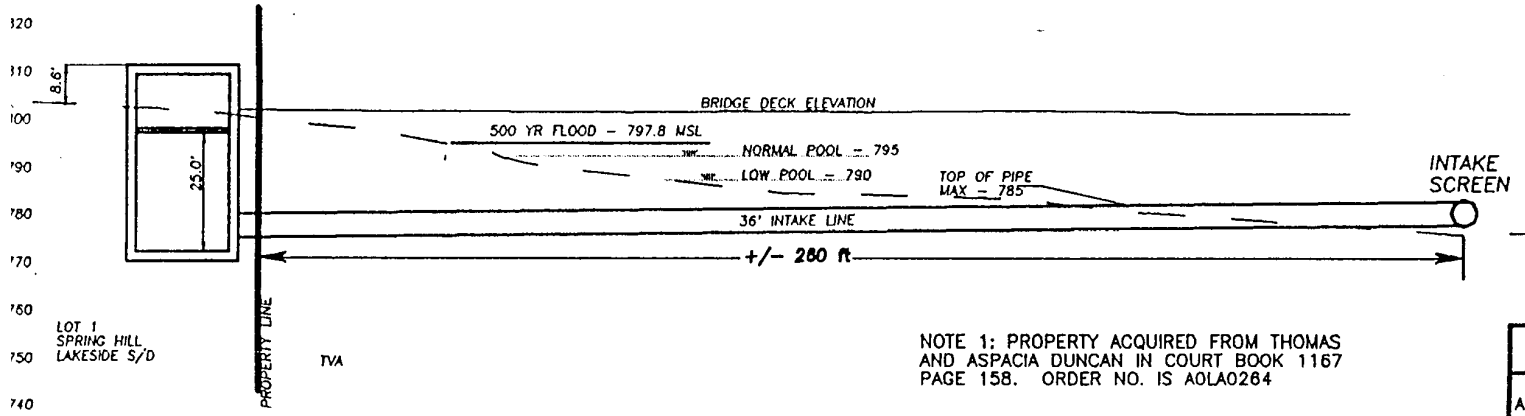
SHEET 9 D

MELTON HILL RESERVOIR
TENNESSEE VALLEY AUTHORITY
MAPPING SERVICES BRANCH

500 0 500 1000 1500 2000
SCALE OF FEET

CHATTANOOGA | MAR. 1965 | 43 | MS | 421B511-D-9 R.2.



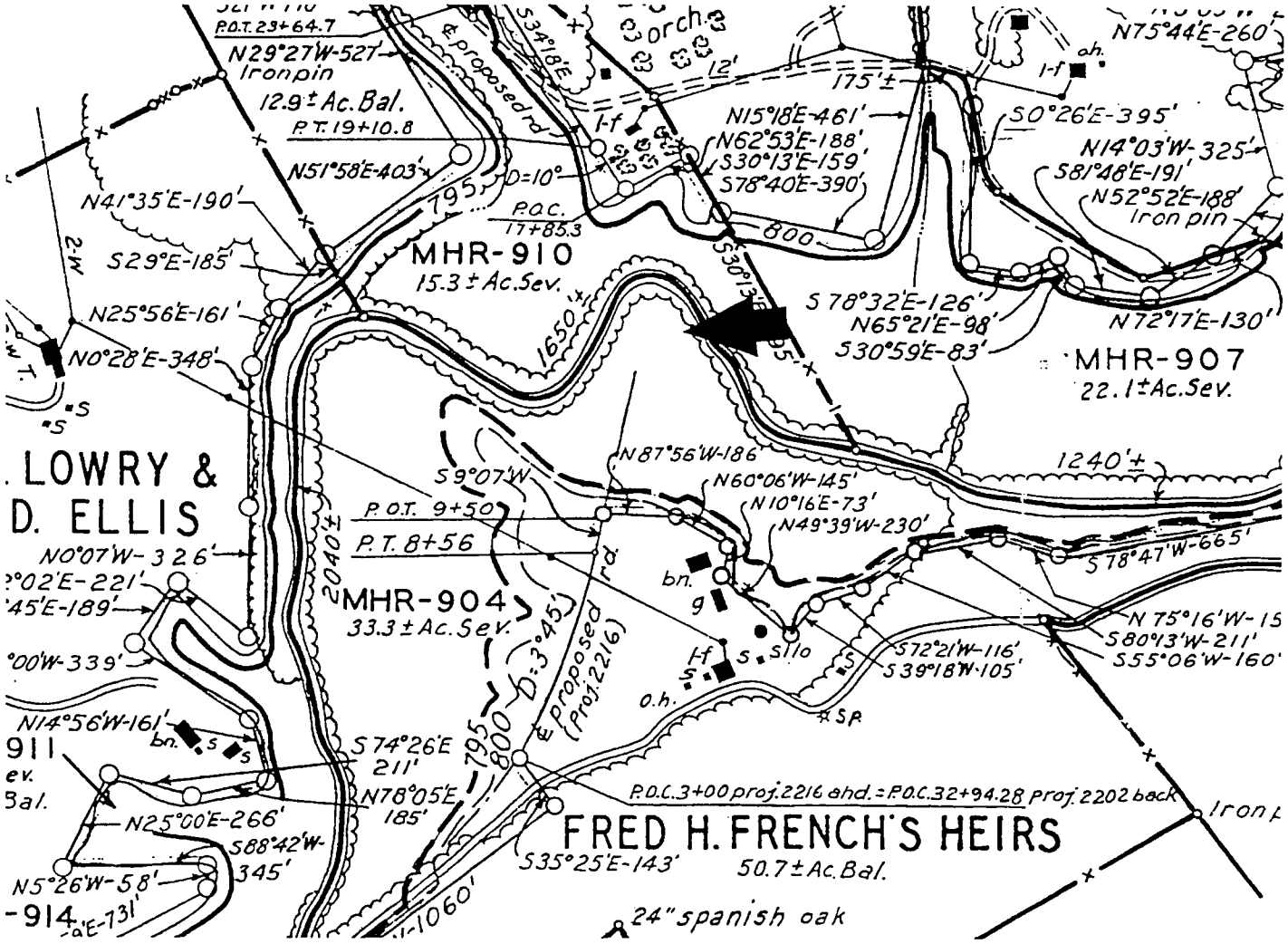

BENCH MARK – ELEV 804.703
STD TVA CAP BM-MH-63
SET IN TOP OF CURB GUARD

BEARINGS BASED ON LAMBERT GRID BASED ON WPA MARK 1-15-7 NEAR INTERSECTION OF COPPER RIDGE AND HENDERSON ROAD

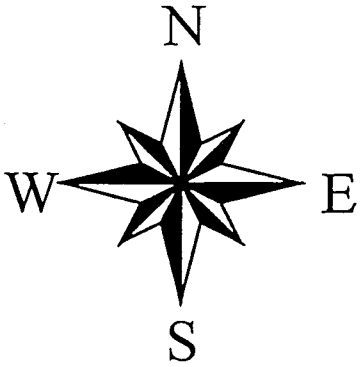
NOTE 1: PROPERTY ACQUIRED FROM THOMAS AND ASPACIA DUNCAN IN COURT BOOK 1167 PAGE 158. ORDER NO. IS A0LA0264

| PERMIT DRAWING<br>HALLSDALE POWELL RAW WATER INTAKE | | |
|---|---|---|
| ANDERSON CO., TN. | SCALE<br>H: 1"=40'<br>V: 1"=4' | DRAWN BY<br>RGC, II |
| SURVEYED BY<br>ROBERT G. CAMPBELL & ASSOC., L.P. | | |

# Melton Hill Reservoir




Land Acquisition Map 9D



NOV 2 0 2000


ROBERT G. CAMPBELL & ASSOCIATES, L.P.

7523 TAGGART LANE
KNOXVILLE, TN 37938
(865) 947-5996
FAX (865) 947-7556
e-mail: rgcampb@aol.com

November 20, 2000

Tennessee Valley Authority
Melton Hill Land Management Office
2009 Grubb Road
Lenoir City, TN 37771

Re: Hallsdale Powell
Raw Water Intake
Melton Hill Reservoir
Bull Run Mile 2±
Parcel MHR - 904

Gentlemen:

Per your recent request enclosed please find an updated copy of the site plan for the proposed installation. As shown 2-36 inch diameter line will extend approximately 260 feet into the reservoir, at elevation 785.0.

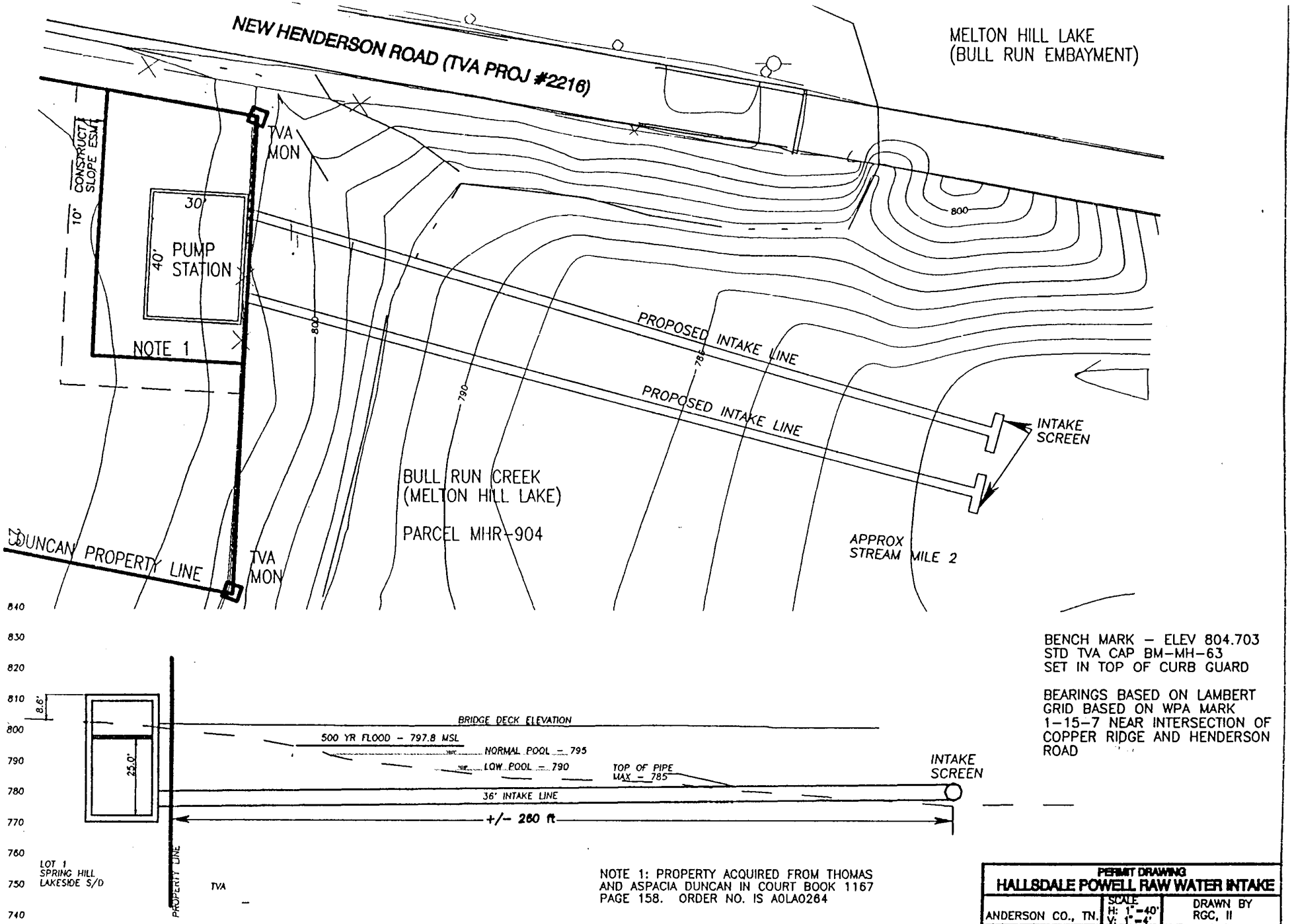
If further information is required please advise.

Sincerely,

Robert G. Campbell

RGC:md

Enclosure




BENCH MARK – ELEV 804.703
STD TVA CAP BM-MH-63
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| PERMIT DRAWING<br>HALLSDALE POWELL RAW WATER INTAKE | | |
|---|---|---|
| ANDERSON CO., TN. | SCALE<br>H: 1"=40'<br>V: 1"=4' | DRAWN BY<br>RGC, II |
| SURVEYED BY<br>ROBERT G. CAMPBELL & ASSOC., L.P. | | |
| DATE<br>2-15-00 | PROJECT NUMBER<br>98820 | |